

***Obesity and Overweight
In Maryland***

A report prepared by the
Maryland Department of Health & Mental Hygiene
Community and Public Health Administration
Division of Cardiovascular Health & Nutrition
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Introduction

The prevalence of overweight and obesity in both children and adults in Maryland is on the rise. Obesity is a primary risk factor for cardiovascular disease (the leading cause of death in Maryland), some cancers and arthritis. In 1994, approximately 2.5 billion dollars was spent in Maryland on direct (health care costs) and indirect (lost productivity) costs associated with cardiovascular disease alone.

Very small changes in the weight status (5-10%) of an overweight or obese individual can have a large beneficial impact on health status and may reduce individual health care costs, which in turn will effect public health care costs. In 1995, the national health care cost attributable to obesity was \$99.2 billion. This represents approximately 10% of total national health care costs.

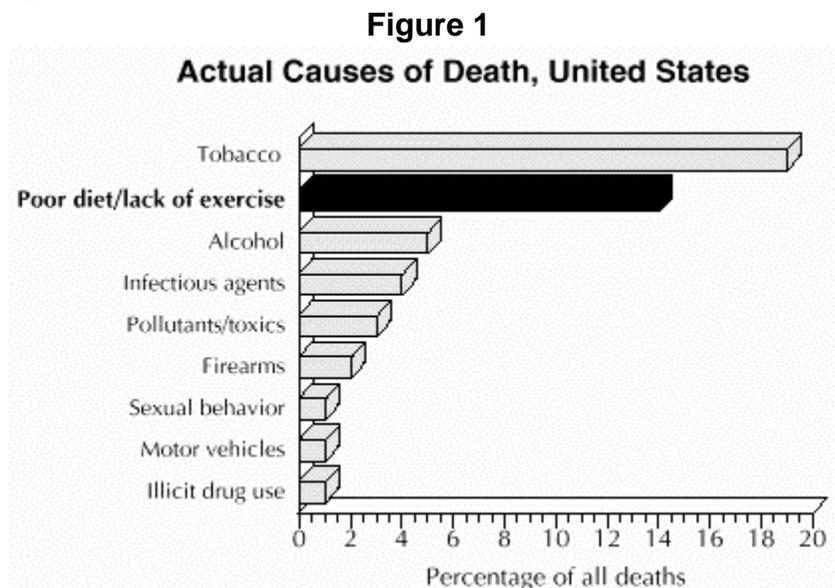
Treatment and prevention strategies are necessary to help reduce the incidence of overweight and obesity and the costs associated with these conditions. Healthy eating and physical activity play equally important roles in the prevention and management of overweight and obesity. Even when pharmaceutical approaches are employed, physical activity and healthy eating are essential components for weight loss and maintenance.

Definitions of Overweight and Obesity

Overweight in adults over 18 years old is defined as Body Mass Index (BMI) between 25.0 and 29.9. Obesity is defined as a BMI of 30.0 or greater. Overweight for children and adolescents is defined as greater than or equal to the 85th percentile of BMI. A child with a BMI greater than or equal to the 95th percentile for age and height is considered obese.

Causes of Overweight and Obesity

Overweight and obesity develop when an individual consumes more energy than expended. Between 1977 and 1996, average daily calorie consumption increased by 10% in the United States. Poor diet and physical inactivity are the primary causes of overweight and obesity. Nutrition and physical activity are independently associated with chronic disease mortality, as shown in Figure 1.



Source: McGinnis JM, Foege WH. Actual causes of death in the United States. JAMA 1993; 270:2207-12. (1990 data).

Between 1977 and 1996, average daily calorie consumption increased by 10% in the United States. This average increase of 68,620 calories per person per year translates into approximately 19.6 pounds of body weight per person per year when activity levels are unchanged.

U.S. data show the percentage of individuals participating in regular activity has increased while the percentage of inactive and irregularly active individuals has decreased slightly. People may be exercising more regularly, but have significantly reduced their energy expenditure in daily activity related to work, transportation and personal chores, by spending more time in elevators, cars and in front of the television. Children who watch more than five hours of television a day are 4.5 times more likely to become overweight than those watching two hours or less.

Disease Burdens Associated with Overweight and Obesity

Cardiovascular Disease (CVD)

- Obesity increases CVD morbidity and mortality primarily through its effect on blood lipid levels, blood pressure and blood sugar levels. Weight loss of 5 to 10% can significantly reduce each of these parameters.
- Losses of 6-10% body weight results in reduced pharmacy costs of \$61.07/month for hyperlipidemia and \$0.20/month for hypertension.
- An obese individual is nearly three times more likely to die from CVD than an individual of normal weight.
- Obese men are 1.9 times more likely than normal weight men to develop coronary heart disease (CHD). Obese women are 1.7 times more likely than normal weight women to develop CHD.
- In 1994, cardiovascular disease contributed to more than 41% of deaths in Maryland.

Diabetes (type II)

- Obesity is the largest environmental influence on the prevalence of diabetes in a population.
- Obesity complicates the management of type II diabetes by increasing insulin resistance and glucose intolerance.
- A weight loss of as little as 5% can reduce blood sugar levels.

Hypertension

- Over 75% of hypertension cases are directly attributed to obesity.
- People 20% overweight have 8 times the incidence of hypertension compared to people at healthy weights.

Arthritis

- Obesity is associated with the development of osteoarthritis (OA) in the hand, hip, back and especially the knee.
- Modest weight loss of 10 - 15 pounds may relieve symptoms and delay disease progression of OA in the knee.

Cancer

- Research suggests that overweight and obesity are risk factors for breast, esophageal, gastric, colorectal, endometrial, and renal cancers.

Other diseases and disorders associated with obesity and overweight include birth defects, gallbladder disease, gout, liver disease, low back pain, sleep apnea, stroke, urinary incontinence, and surgical complications.

In children and adolescents, overweight and obesity have been associated with several cardiovascular risk factors, including hyper-cholesterolemia and hypertension. As the prevalence of overweight and obesity in children and adolescents has been climbing, diabetes, hypertension and other obesity-related chronic diseases that are prevalent among adults are becoming more common in children and adolescents.

Health Care Access and Quality of Life

Aside from the increased morbidity and mortality associated with obesity, overweight individuals suffer other consequences. Obese individuals may be denied access to health services when they are unable to obtain health insurance due to their weight. Reimbursement for weight loss or weight maintenance programs is rarely available.

Limited mobility and physical endurance as well as the increased likelihood of social, academic and job discrimination effect the quality of life of overweight and obese individuals.

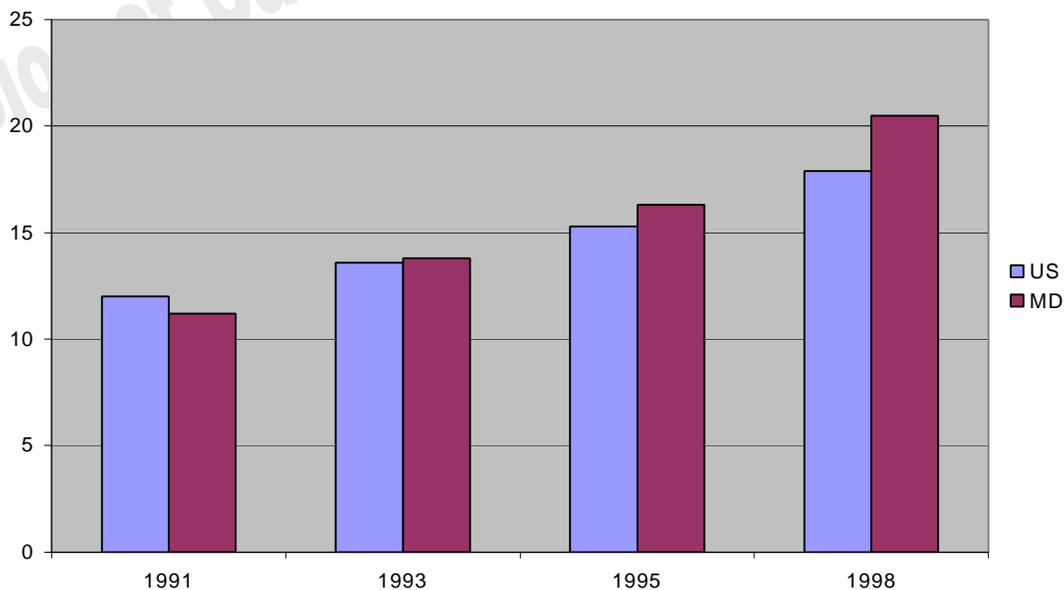
Overweight and Obesity in the United States

Adults

The prevalence of obesity throughout the United States has increased from 12.0% in 1991 to 17.9% in 1998 (Figure 2). In Maryland, the prevalence of obesity increased by 75.8% between 1991 and 1998. By 1998, 20.5% of adult Marylanders were obese.

Figure 2

Prevalence of Adult Obesity: US & MD

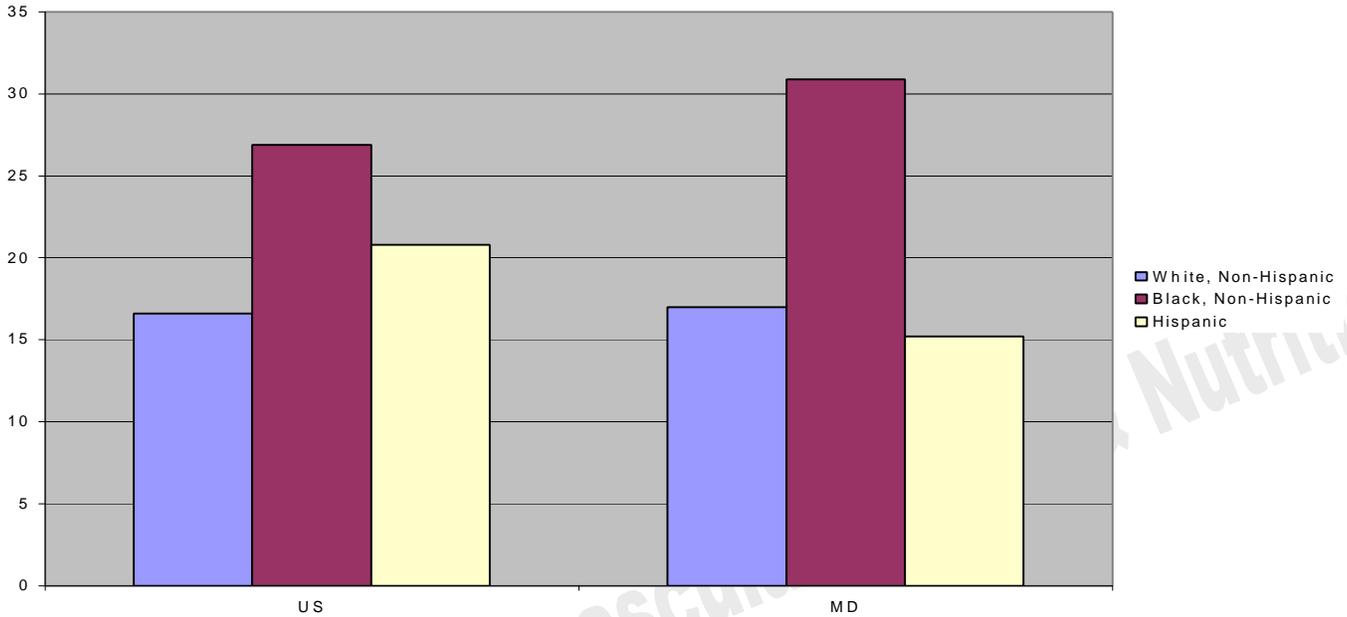


Source: BRFSS

In Maryland, a wider gap exists between the prevalence of obesity in blacks and that of whites than in the United States as a whole (Figure 3). In Maryland, the prevalence of overweight and obesity among blacks is increasing at a faster rate than that of whites or Hispanics (Figure 4).

Figure 3

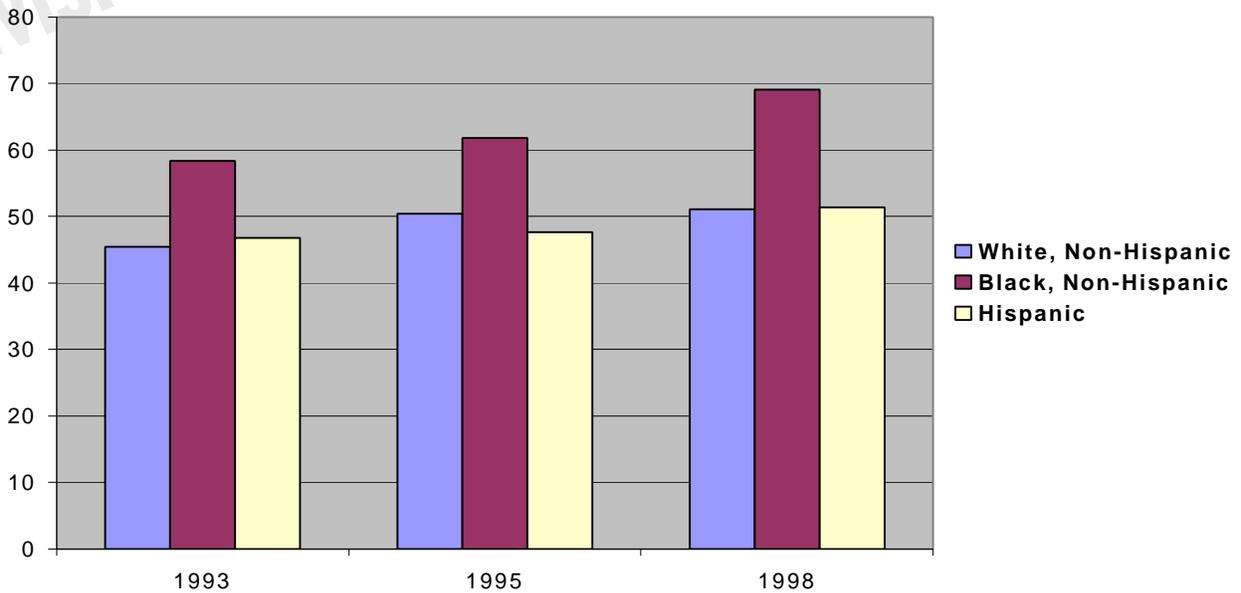
Prevalence of Adult Obesity Among Racial Groups: US & MD, 1998



Source: BRFSS

Figure 4

Prevalence of Overweight & Obesity in Maryland Among Racial Groups, 1993 - 1998



Children & Adolescents

Over the past 30 years, the prevalence of childhood obesity increased by approximately 50% nationally (Figure 5). Rates of overweight have increased by nearly 200%. Today, approximately one fourth of children and adolescents are overweight and obese. Childhood and adolescent obesity is more prevalent in African American and Hispanic populations (Figure 6).

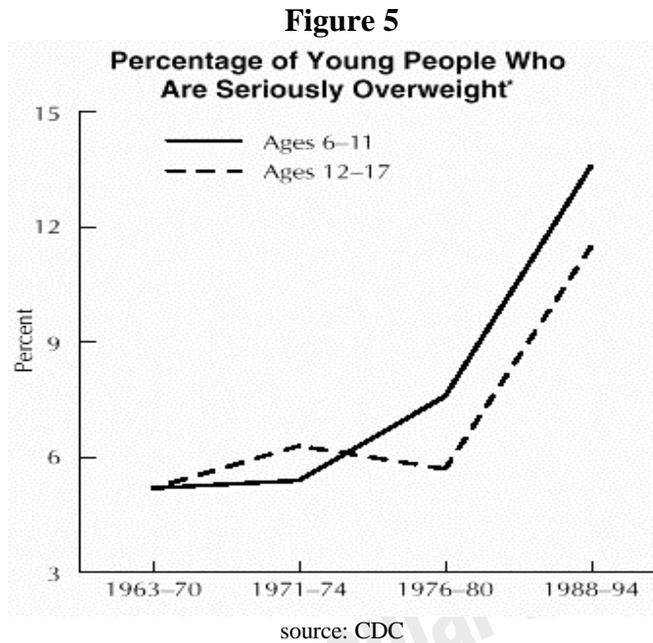
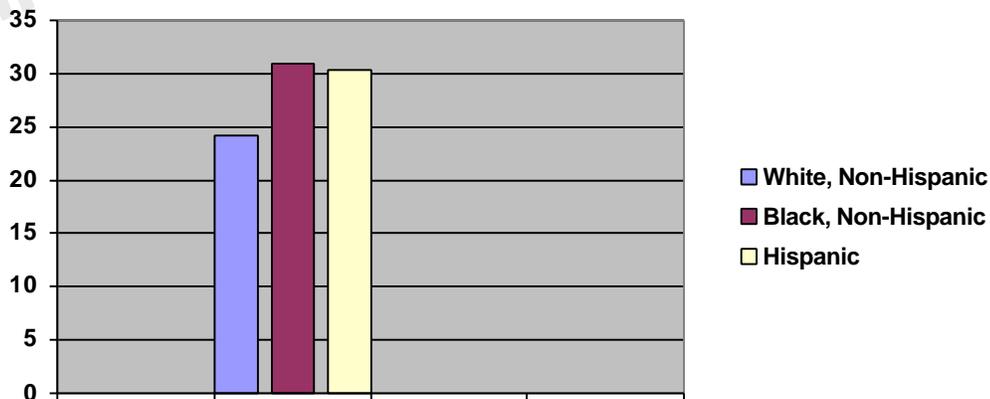


Figure 6
Overweight and Obesity in Children and Adolescents Among Racial Groups, 1994



Source: American Obesity Association

Excess weight in childhood and adolescence predicts overweight as adults. For example, 10-13 year old obese children are reported to have a 70% likelihood of obesity persisting into adulthood. Data on children and adolescents in Maryland is not available due to the fact that Maryland does not currently participate in the Youth Risk Behavior Surveillance System. Plans currently exist to implement the YBRFSS beginning in Spring, 2001.

Current Guidelines in the Treatment & Prevention of Overweight & Obesity

- *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults* (NIH-NHLBI). The guidelines provide evidence for the effects of treatment on overweight and obesity. They focus on the role of the primary care practitioner in identifying and treating overweight and obesity in adults. (Adults)
- *Obesity Evaluation and Treatment: Expert Committee Recommendations* (Pediatrics, 1998). These recommendations for physicians, nurse practitioners and nutritionists guide the evaluation and treatment of overweight children and adolescents. (Children)
- *Surgeon General's Report on Physical Activity and Health*, 1996. This report presents evidence on the effects of physical activity on health and disease. The main message of the report is that Americans can substantially improve their health and quality of life by including moderate amounts of physical activity in their daily lives.
- *Nutrition and Your Health: Dietary Guidelines for Americans, Fourth Edition*, 1995, USDA & USDHHS. These guidelines recommend decreasing calorie intake and increasing physical activity to lose weight. *The National Association for Sports and Physical Education Guidelines*. The guidelines recommend minimum daily activity levels for school-aged children.
- *Guide to Clinical Preventive Services*, Report of the U.S. Preventive Service Task Force, 1996. This reference on the effectiveness of clinical preventive services and counseling for risk reduction is currently under revision. The current edition highlights the health consequences of behavior, specifically, tobacco use, poor diet, lack of physical activity and alcohol use.
- *The National Association for Sports and Physical Education Guidelines*. These guidelines recommend minimum daily activity levels for school-aged children.

Current Activities To Reduce the Prevalence of Overweight and Obesity in Maryland

Move It Maryland Physical Activity & Nutrition Coalition

Move It Maryland is a coalition of organizations promoting physical activity and healthful eating throughout Maryland to improve health and prevent chronic disease. The Division of Cardiovascular Health & Nutrition is the coalition coordinator. A June, 2000 workshop aims to increase local level environmental and policy changes to promote healthy eating and physically active lifestyles. Representatives from health and community organizations in all local political jurisdictions will be invited to attend the workshop.

Conference on Addressing Childhood Obesity Through Schools

The Division of Cardiovascular Health and Nutrition is co-sponsoring a conference with the Maryland State Department of Education (MSDE) and Maryland Association of Physical Education, Health, Recreation and Dance Educators (MAPHRD) to provide education and training on the prevention of obesity and inactivity among children in the school environment. Educators, school nurses and community health professionals will be invited to attend this conference in spring, 2000.

Community Nutrition Education Exposition

The Maryland Nutrition Education Coalition began as a sub-committee of the State Advisory Council on Nutrition. The coalition's goal is formation and strengthening of private and public partnerships to coordinate nutrition education activities and promote a strong and consistent nutrition education message to Maryland citizens. The Division of Cardiovascular Health & Nutrition is a member of this coalition.

Activities planned for 2000 include a Nutrition Education Exposition and Workshop in March promoting nutrition and physical activity interventions in the community to professionals.

Partnerships with Local Health Departments

The Division of Cardiovascular Health and Nutrition provides grant funds to local health departments for promotion of environmental changes to increase physical activity, prevent obesity, promote healthful eating and assist those who are overweight in weight loss and maintenance.

The Partnership for Healthy Weight Management

The Division of Cardiovascular Health and Nutrition is a member of the National Partnership for Healthy Weight Management, a coalition of representatives from science, academia, health care professions, government, commercial enterprises and organizations promoting the public interest. This coalition sets voluntary guidelines for distribution to the public.

The Maryland State Advisory Council on Physical Fitness

The mission of the Maryland State Advisory Council on Physical Fitness is to educate, advise and encourage the citizens of Maryland to gain health benefits and enhance the quality of their lives through regular physical activity and exercise. The Council on Physical Fitness advocates appropriate health care; promotes self-monitored physical activity and distributes educational/motivational materials regarding nutrition, physical activity and weight loss.

RECOMMENDATIONS

- Focus health promotion messages on balancing energy (calorie) intake with physical activity since they are equally important.
- Raise awareness of the problem of overweight and obesity in Maryland, especially among health professionals.
- Increase physician use of the NHLBI *Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults* and *Obesity Evaluation and Treatment: Expert Committee Recommendations*.
- Provide professional education for physicians and other health professionals in assessment and referral of overweight and obese patients to licensed dietitians and licensed nutritionists.
- Study reimbursement issues for counseling and treatment of overweight and obesity by licensed dietitians and licensed nutritionists.
- Promote environmental and policy changes to increase opportunities for physical activity and healthy eating in Maryland.

To implement these recommendations, there should be a Maryland Advisory Council. There should be discussion about whether or not this would be a committee of an existing Advisory Council or a new group. Whatever the decision, the groups of health professionals, educators, community leaders, faith groups, businesses, departments of state, and local government (Transportation, Parks and Recreation, Education), is needed. State Advisory Councils currently in existence* should be considered in the creation of a Maryland Advisory Council on Overweight and Obesity. Funds for staffing, promoting the activities of the Advisory Council and for program development will be necessary.

* *Maryland State Advisory Council on Nutrition*

Maryland State Advisory Council on High Blood Pressure and Related Cardiovascular Risk Factors

Maryland State Advisory Council on Physical Fitness

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Division of Cardiovascular Health & Nutrition